



From World War II to the Interstates

Bridges Change Montana's Transportation Landscape

FROM REPLACING deteriorated county bridges in the 1920s to expanding Montana's infrastructure during the Great Depression, the Montana Highway Department struggled to keep up with the demands placed on it by county, state, and federal agencies. World War II brought a brief respite due to material shortages and the federal government's focus on the war effort, but post-war economic expansion caused road and bridge building to boom again as commercial trucking, recreational tourism, and the Cold War created a need for improved roads and bridges. The Cold War drove much of that economic expansion as the federal government reacted to its new role as the avatar of democracy in the world. The Cold War manifested itself domestically in a variety of ways, including increased defense spending for improvement of the country's transportation infrastructure, which culminated in the Federal Aid Highway Act of 1956 that created the interstate highway system.

Within weeks of the Japanese attack on Pearl Harbor and President Franklin Roosevelt's declaration of war, the highway commissioners canceled all bridge projects scheduled for construction for the next few years but allowed those already underway to be completed. Only those projects essential to the national defense could be certified by the War Department.¹ Unless the highway or bridge was located on a priority one section of the strategic highway network, the Army and Navy would not authorize federal expenditures. In Montana, only projects on U.S. Highways 10 and 91 fell into that category. The military retained strict control of steel, restricting its use for projects deemed essential to the war effort. As the highway department's demanding program that had begun during the Great Depression faded, the department encouraged its employees to find work in the war industries, promising them their jobs when the "national emergency" ended.²

Although Montana was traversed by three major east-west routes (U.S. Highways 2, 10, and 12), only U.S. 10 connected important commercial, industrial, and population centers in the state. The highway, which was later bypassed by Interstates 90 and 94, linked rail centers and oil refineries in Billings and Laurel to the Butte mines and Anaconda smelter, as well as the sawmills around Missoula to the West Coast. By contrast, Highways 2 and 12 passed through sparsely populated agricultural centers. The main north-south route in the state, U.S. Highway 91, provided a connection between Salt Lake City and the Canadian border that included Butte, Helena, and Great Falls. Because the War Department had declared U.S. Highways 10 and 91 critical to the national defense, the highway commission allocated more money between 1942 and 1956 to projects on those routes than it did on any other roads and bridges in the state.

The Montana Highway Department concentrated most of its bridge work during the war on U.S. 10 and secondary highways in Stillwater County. Chrome mines critical to the war effort were located in the Beartooth Mountains south of Columbus off Highway 10, the only known source of that ore in the United States. Industries used chrome for airplane frames and other war materiel. The aging bridges in the lower Stillwater River Valley did not meet federal standards for loading, roadway widths, or overhead clearances. In May 1942, the highway commissioners let a contract to build a timber through truss span across the Yellowstone River at Columbus. Built of wood because of shortages in steel caused by war demands, the new bridge replaced an aging steel truss that could not handle the physical stresses placed on it by increased truck traffic between the chrome mines and U.S. Highway 10. Other priority

projects related to the mines included timber bridges on Secondary Highway 420 in Stillwater County between Absarokee and the Mouat and Benbow chrome mines.³

While military needs drove the highway department's limited programs during the war, sometimes Montana's rugged natural conditions reminded the department that certain bridge problems were timeless. At 1:17 P.M. on March 27, 1943, ice destroyed the Yellowstone River Bridge at Fallon. The force of the jam was so enormous that it sheared off all three concrete piers and carried three of the bridge's four spans out of sight. The "entire structure," witnesses recalled, "seemed to break up at the same time, the spans falling from their piers and heading down the river on the ice-pack." Built in 1914 by the Security Bridge Company, the bridge had frequently withstood ice on the river, but an exceptionally cold winter followed by a rapid spring thaw put more ice in the river than the bridge could handle. The loss of the bridge forced motorists on U.S. Highway 10 to make a fifty-five-mile detour around Fallon.⁴

Because the War Department had designated U.S. 10 a strategically important highway, it called for the construction of a new bridge as soon as possible. By June 1943, the highway department's bridge engineers had designed a continuous-span through truss to replace the old structure. Shortly before the highway commissioners awarded the contract for the project, a delegation from Dawson County petitioned for a bridge at a different site, near the community of Marsh. Founded by the Northern Pacific Railroad in 1910, Marsh was a shipping point for sugar beets harvested in the area. The proposed new site, the delegation argued, would be convenient for the many sugar beet farmers living near there.⁵

At the urging of the War Production Board and the Public Roads Administration (formerly the Bureau of Public Roads), the highway commissioners decided against the Marsh site, which would have added ten miles to U.S. 10 and delayed construction. Also, the Public Roads Administration and Army Corps of Engineers had already approved a new site near Fallon for the structure. The highway commissioners tabled the discussion of the Marsh site and immediately called for bids to construct a bridge near Fallon.⁶

The commission awarded the contract to the William P. Roscoe Company in October 1943. Few men have had as big an impact on Montana's construction industry as William P. Roscoe. For thirty years, from 1926 to 1956, Roscoe built more bridges in Montana than any other contractor employed by the highway department. Although he specialized in the construction of large steel bridges, Roscoe also built reinforced concrete and timber bridges.



BECAUSE OF material shortages during World War II, the contractor for building the Fallon Bridge, William Roscoe, had problems acquiring enough steel to build this massive continuous Warren through truss bridge even though it was located on a priority strategic route, U.S. Highway 10. The bridge is the longest continuous span bridge in Montana. Kristi Hager, photographer, MDT

Born in Wadena, Minnesota, in February 1886, William P. Roscoe dropped out of school in 1902 and worked in South Dakota as a cowboy for several years. In 1905, he returned to Minnesota and went to work for William and Arthur Hewetts' Security Bridge Company as a laborer. Within a few years, he worked his way up to foreman and was the company's vice president when the Hewetts moved the company's headquarters to Billings in October 1915. Roscoe had supervised the construction of the first Fallon Bridge in 1914 while employed by Security. He continued his association with the company until 1925, when he formed the William P. Roscoe Company in Billings. The following year, William and Arthur Hewett dissolved the Security Bridge Company. Roscoe was one of the few contractors from whom the highway department bridge engineers sought advice on construction problems.⁷

The new Fallon Bridge took Roscoe over a year to complete. Plagued by labor and steel shortages, high water, and inclement weather, he pushed his crews to complete the bridge by the November 1945 deadline. Roscoe hired men from the Crow Reservation to help pour the concrete piers and sub-contracted with the Texas-based John F. Beasley Company to erect the steel trusses. In July 1944, the *Terry Tribune* wrote of the construction that “to a spectator who likes to have both feet planted firmly on the earth, the sight of the steel crew high up in the air erecting and attaching the steel beams is quite a thrill. The top of the spans are 70 feet above the ground and the men walk around the ‘I’ beams 21 inches in width and on the cross beams nine inches wide as nonchalantly as if traveling on a broad highway.” As the bridge neared completion, the highway commission contracted with the Stanley Arkwright Company to build the approaches to the structure. The new bridge’s location north of town, however, meant that Fallon would be bypassed by the highway.⁸

By mid-October 1944, the Beasley Company had completed the riveting together of the steel trusses and returned to Texas. All that remained was for Roscoe to finish pouring the concrete deck. He opened the bridge for traffic on November 22, 1944, about one year after construction began on the structure. Flagmen regulated the traffic since the contractor had not yet installed the steel guard rails and workmen were still painting the bridge. The massive five-span continuous through truss bridge contains nearly 1,167 tons of structural steel, 126 tons of reinforcing steel in the piers and concrete deck, and 16 tons of cast steel. At 1,149 feet, it remained the longest Yellowstone River bridge in Montana until surpassed by the 2,013-foot bridge on Interstate 94 immediately adjacent to it in 1968. Fallon, Glendive, and Terry residents celebrated the opening of the bridge with a concert provided by the communities’ high school bands in late November. At about the same time, the highway department opened up a five-span continuous through truss bridge across the Powder River on U.S. 10 about seven miles southeast of Terry. Also built by the Roscoe Company, this bridge was the last truss bridge built by the Montana Highway Department.⁹

The War Department funded the construction of the Yellowstone and Powder River bridges because keeping a significant interstate highway open was critical to the war effort. But as victory against the Axis powers appeared imminent, Congress began planning for the postwar years. To that end, it passed the Federal Highway Act of 1944, which provided the foundation for the postwar highway-building boom by allocating \$1.5 billion to the states

for road and bridge construction. The money, however, would not become available to them until after the conclusion of the war. Importantly, the act created the National System of Interstate and Defense Highways and put more emphasis on roads and bridges in urban areas and secondary highways. Those roads had been largely neglected by the highway commission during the war. The act also directed Montana governor John Bonner, the highway department's former chief legal counsel, to create the Montana Highway Planning Committee (MHPC) to study the state's highway needs over the next decade. Changing highway design standards and traffic demands made most of Montana's highway system obsolete by the end of the 1940s. Narrow roads and bridges, tight curves, and poor alignments made Montana's highways incapable of handling the traffic pressures that would be placed on the state's road infrastructure in the postwar years. Bonner formed the committee to address the state's future transportation requirements and how best to finance improvements.¹⁰

Composed of engineers, businessmen, and those employed in the agricultural and mineral industries, the committee published its findings in 1948. The report concluded that most of the bridges built by the highway department in the 1930s would not be able to tolerate the loads placed on them by the modern commercial trucking industry. Prior to World War II, there had been little discussion about the industry in highway commission meetings. By the late 1940s, however, bigger trucks and increased traffic due to the postwar economy made the highway engineers take note of the damage the trucks caused. Although the federal government's make-work programs of the New Deal had helped upgrade the state's road infrastructure, years of neglect during the war put the road system in dire need of repairs and improvements. The report cited problems with bridges not built to postwar loading standards and that many of them were narrower than the roads leading to them, a serious safety hazard for motorists.¹¹

Even before the Montana Highway Planning Committee first met, however, the Montana Highway Department had begun upgrading Montana's bridge infrastructure by improving bridges on both primary and secondary routes, mostly through widening already existing structures, and putting to use new designs that reflected the postwar era. Steel girders replaced trusses as the material of choice for river crossings in the late 1940s (they would be replaced by prestressed concrete in the early 1960s), which included the construction of large girder and steel stringer bridges over the Beaverhead, Bitterroot, Clearwater, Musselshell, and Madison rivers. Girders were cheaper to construct

than through trusses and did not impose the same overhead restrictions for commercial trucks. For shorter spans, the highway department continued to rely on timber bridges to cross smaller streams and drainages. In addition, an overpass in Great Falls resurrected the railroad grade separation program in 1946. Unlike the Works Progress Grade Crossing Highway Program of the 1930s, however, the federal government required the railroads to fund only ten percent of grade separation structures if it replaced an older overpass. The government funded the entire cost of the structure if it was a new grade separation.¹²

The highway department's postwar program also concentrated on the replacement of old county bridges on secondary roads and truss structures on state-administered primary routes. In 1948, Phillips, Blaine, and Fergus county representatives, headed by state senator Fred Robinson of Malta, renewed their campaign for a Missouri River bridge linking Malta and Lewistown. In 1953, they convinced the state legislature to create a toll bridge authority to fund construction of the structure.¹³

Many of the big bridges designed and built by the Montana Highway Department after World War II were located in proximity to the state's major urban centers in an effort to improve trade networks between Montana's cities and towns. In 1948 and 1949, the commission let contracts to build new bridges near Butte, Missoula, and Billings. One of the most important of these projects was a new bridge across the Missouri River at Great Falls, which had a profound effect on the city, permanently altering its pattern of development by creating a new entrance to it. Before 1951, the First Avenue North Bridge provided the only access to Great Falls from west of the river. Tenth Avenue South consisted of a scattering of warehouses, tourist cabin camps, auto repair shops, and working-class dwellings. Within a decade after the completion of the bridge, this street in the "Electric City" transformed into one the state's busiest thoroughfares, lined with stores, service stations, restaurants, and, by 1959, one of Montana's first shopping malls. Where Tenth Avenue South once dead-ended at the Missouri River, it now provided access to two major highways and the expanding Malmstrom Air Force Base.¹⁴

In June 1949, the highway commission let the contract for the construction of the Tenth Avenue South Bridge, the largest contract the highway department had ever handled. The bid of Anderson Construction Company of Great Falls—\$1.7 million—beat competitors' bids by \$221,000, and the company won the contract to build the combination steel girder and reinforced concrete structure. The 2,093-foot bridge consists of six steel-girder

A Great Asset and Convenience: The Fred Robinson Bridge

THE CROWNING ACHIEVEMENT of the Montana Highway Department's bridge program during the 1950s was the Missouri River Bridge between Malta and Grassrange. Later designated the Fred Robinson Bridge by residents grateful to the man who worked so hard to get it built, the bridge was the most expensive and prominent structure built in Montana during the decade. The culmination of a four-decade effort by residents in Blaine, Fergus, and Phillips counties, it provided a river crossing that encouraged economic development of central Montana.¹

Businessmen, ranchers, and farmers from these counties joined together in 1920 to promote the construction of a bridge between Malta and Lewistown. Other than six seasonal ferries, there was no river crossing between Fort Benton and Fort Peck. The crusade gained momentum in 1922 when influential Lewistown newspaperman Tom Stout was elected chairman of a committee formed to pressure the State Highway Commission into building the bridge. By 1929, the committee had gained sufficient influence in the Montana legislature to compel lawmakers into taking action.



The culmination of a decades-long effort by businessmen, ranchers, and farmers on the High Line and in central Montana, the Fred Robinson Bridge provided a north-south connection to that hitherto remote section of the state. Kristi Hager, photographer, MDT

House Joint Resolution No. 4 directed the highway commission "to make necessary examinations and surveys preliminary to the location for construction of highway bridges over the Missouri and Yellowstone rivers."

In January 1931, the highway commission presented its report to the Twenty-second Legislature in Helena. Out of the many sites investigated, the commissioners recommended two to the legislature: the Power Plant site southwest of Hays and the Rocky Point site south of Malta. Both sites had good foundations in Bearpaw shale with river channels that were not prone to migrating. The preliminary plans for each bridge consisted of a multi-span Pennsylvania through truss, which would cost \$440,000 at Power Plant or \$325,000 at Rocky Point. The largest expense, however, was for construction of the approach roads. For Power Point the commission estimated costs at \$1,520,000, and \$1,345,000 at Rocky Point. Rocky Point's lower estimated costs helped make it the preferred location, but before anyone could take action on the recommendation, Montana plunged into the Great Depression, and the commission had to halt most of its major bridge construction projects. Nevertheless, representatives from Phillips, Blaine, and Fergus counties met occasionally with the commission about the bridge, and one of these representatives was Phillips County state senator Fred Robinson.

Born in Tennessee in 1889, Fred Robinson came to Montana in 1911 and took up a squatter's claim on 320 acres north of Wagner in Phillips County. He worked on the Milk River Irrigation Project and owned a general store in Wagner before enlisting in the U.S. Army during World War I. Upon his return to Montana, he served as county assessor for Phillips County and co-owned an automobile business in Malta. In 1936, the citizens of Phillips County sent him to the state senate, where he served until his retirement in 1960.

In January 1945, Robinson successfully lobbied the Twenty-ninth Legislature to pass House Joint Resolution No. 1, essentially a reiteration of the March 1929 legislation. The highway department bridge engineers replaced the old through truss design with a modern seven-span steel girder layout, but the commissioners still did not have enough money to build the structure. The project languished until 1951 when Senator Robinson proposed constructing the bridge as a toll facility. He claimed that bonds raised to build the bridge could be retired after fifteen years if the state charged two dollars per passenger vehicle, and he convinced his legislative colleagues in the next legislative session to authorize the creation of a toll bridge authority to sell bonds "and to take other action necessary to construct, maintain, and operate toll bridges" in Montana. The only stipulation contained in the law, which the 1953 legislature passed specifically for the construction of a Missouri River bridge south of Malta, was that it could not be located within fifty miles of a free bridge. Within a year, however, the highway commissioners learned that the bridge could be financed through the regular process without the need for making it a toll facility. Indeed, because the site of the proposed bridge was located on federal land within the Charles M. Russell National Wildlife Refuge, the federal government would pay the full cost.

In July 1955, the State Highway Commission finally advertised for bids to construct the bridge. Unfortunately, all bids came in over the engineer's estimate. Consequently, the commission held off re-advertising the contract until it had modified the design. On October 25, 1956, the Wyoming-based N. A. Nelson Construction Company's low bid of \$718,051.25 won them the contract. The Paper, Calmenson and Company of St. Paul, Minnesota, obtained the contract to provide the reinforcing steel for the concrete piers, while the American

Bridge Company of Gary, Indiana, would supply the structural steel. Caird Engineering of Helena submitted the low bid for the steel guard rails. The Nelson Company purchased the cement for the bridge from the Ideal Cement Company of Trident. It obtained the aggregate from a commercial gravel pit near Lewistown.

The construction of the bridge proved a logistical nightmare. The site was located thirty-one miles from the nearest railroad terminal at Roy, and the building material had to be trucked in over a road that was "mostly a trail of the worst kind of gumbo imaginable." The materials could only be hauled in during periods of dry weather. Nelson established a twelve-unit trailer camp at the bridge site (at the current site of the Bureau of Land Management's recreational facility). To accommodate the workers, the company drilled a well, laid water and sewer pipes, and built a small electric light plant. Despite the amenities, the contractor's superintendent, Earl Rook, recalled that he "had more trouble keeping experienced men on the job than on any job he [had] ever built." The contractor's crews worked two eight-hour shifts per day while excavating the foundations and one eight-hour shift a day while the piers were being poured. Workers completed



Fred Robinson

the bridge's substructure on December 20, 1957. Because the structural steel had not yet arrived from Indiana, the highway commissioners issued a shut down order just before Christmas 1957.

The structural steel did not arrive in Roy until June 3, 1958, a delay of nearly six months; moreover, late spring rains that turned the roads to gumbo prevented trucking of the steel to the construction site until June 27.

To meet the contracted deadline, the Nelson Company expanded its work schedule to nine-hour days, six or seven days a week. The company completed the superstructure and had just begun painting the bridge when a second shut down order was issued on November 22, 1958. It was not until March 27, 1959, that the bridge opened for traffic. The final cost of the structure was \$716,633.75.

Over five thousand people attended the dedication ceremony for the bridge on August 16, 1959, a celebratory event that concluded a thirty-nine-year effort by central Montanans to provide a connection between the north and south sides of the Missouri River. The bridge's significance manifested itself in the thousands of people who drove, boated, and flew to the remote site in north-central Montana to attend the dedication. ❁

main spans and twenty-one steel-stringer approach spans. The approaches rest on reinforced concrete hammerhead piers, the first of that design built in Montana. Instead of the standard ten-foot driving lanes, the bridge carried two fourteen-foot driving lanes over the river on a deck flanked by decorative concrete guardrails.¹⁵

The highway commission's new long-range plan to improve intra- and interstate travel and commerce manifested itself in the new Tenth Avenue South Bridge. In May 1951, the highway commissioners, at the request of

Governor Bonner, designated the structure the O. S. Warden Bridge, named for Oliver S. Warden, former publisher of the *Great Falls Tribune* and member of the highway commission from 1924 to 1936, who was a tireless advocate of improved roads and bridges. Warden had envisioned the construction of a bridge on Tenth Avenue South as a way to stimulate economic development in the 1930s. Dedication of the structure took place during the city's annual Fall Festival on September 15, 1951. Warden's widow, Eleanor, and son, Jock, cut the ribbon to the structure, opening up what would be one of the most important bridges built in Montana during the twentieth century. Great Falls Chamber of Commerce president Ray Welter called the bridge a "lasting monument to the loyalty and vision of community leaders with a burning desire to serve their fellow men." The bridge provided a new entrance to Great Falls off U.S. Highway 91 (and later Interstate 15) and facilitated the shipment of goods between eastern and western Montana via Montana Highway 200.¹⁶

The Warden Bridge symbolized the optimism and prosperity of the highway department's bridge programs after the war. Many counties, however, were forced to replace old bridges that were located on county-owned roads and were ineligible for federal funding during this period. Due to the lack of money, they were obliged to seek innovative ways to provide good bridges for their citizens. The upper Marias River south of Chester was hell on bridges. In 1914, Missoula contractor O. E. Peppard built a double-span, 145-foot through truss across the river on the county road between Chester and Fort Benton. In 1947, ice destroyed the bridge's center pier and deposited one of the spans on the riverbank about one-half mile downstream. Because it was a county-owned bridge and not located on a state-maintained highway, the Liberty County commissioners immediately began plans to repair the bridge without the use of federal funds. Before the county could repair the old bridge, however, another ice jam on the Marias carried it another mile downstream and demolished the span. The county circulated petitions to determine if the residents in the area wanted to repair the old bridge or fund the construction of a new one. More than the required twenty percent of the voters signed the petition, so the commissioners held a bond election and raised \$53,520 to replace the bridge. The county hired the Billings engineering firm of T. H. Hurdle and Sons to design the new structure.

To keep costs down, engineer Tom Hurdle developed an innovative braced chain-type suspension system for the new bridge rather than the traditional wire cables used on other suspension bridges. The system, whose ancestor was the 1877 Point Bridge in Pittsburgh, precluded the need for river piers, which

IN SEPTEMBER 1951, the City of Great Falls officially opened the O. S. Warden Bridge on Tenth Avenue South. The bridge changed the character of the Electric City by placing a mostly residential and light industrial street on one of the primary east-west routes through Montana. Consequently, the development of Tenth Avenue South exploded, making it one of the state's busiest thoroughfares. At 2,093 feet, the bridge remains one of the longest in Montana, consisting of six main spans and twenty-one approach spans. Kristi Hager, photographer, MDT







COMPLETED IN 1951, the Pugsley Bridge crosses the Marias River south of Chester in Liberty County. In 1947, ice jams destroyed the old through truss bridge that crossed the river at this site. In an effort to avoid future problems with ice jams, Liberty County hired the Billings-based T. H. Hurdle and Sons Company to design a new bridge that would span the river without the need for river piers. The company came up with this innovative cable-stay suspension system for the new bridge at the site. Kristi Hager, photographer, MDT

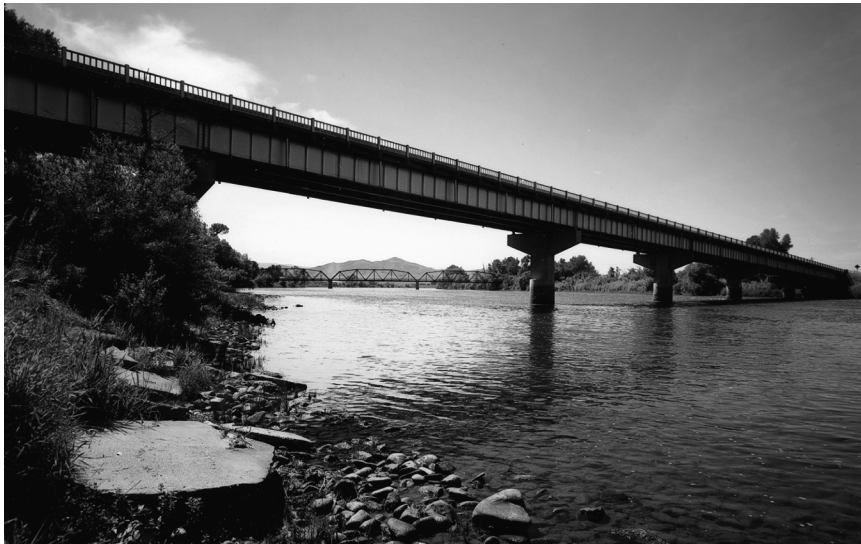
kept the cost of the new structure within the county's budget. Hurdle's design for the new bridge included a pair of cables on each side of the structure, that unlike the conventional suspension bridge, has one cable on each side. The new bridge, moreover, used portions of the original 1914 structure in its design, including the concrete abutments and one of the approach span piers.

Tom Hurdle began construction of the suspension bridge in September 1949, with his brother Willard supervising a crew of eight men, all county employees. According to Tom Hurdle, equipment used to construct the bridge

included only a “backhoe, concrete mixer, 2-drum hoist . . . winch truck, compressor, and welding equipment.” The Great Falls Iron Works provided the structural steel for the bridge, while the Los Angeles–based Pacific Wire Rope Company supplied the steel suspension cables. The workers completed the structure in July 1951.

Named for local rancher Leonard Pugsley, the Pugsley Bridge in the breaks below the Tiber Dam south of Chester consists of a three-span structure with the main 290-foot span suspended by steel cables ranging from 2 to 2.25 inches in diameter. The cables are suspended from two fifty-one-foot tall anchor towers and are stiffened by double angle strut stiffeners to strengthen the structure and provide wind resistance. The steel cables are anchored to concrete blocks thirty-two feet long, six-feet thick at each end of the bridge. The bridge supports a sixteen-foot wide roadway. The Pugsley Bridge was the only one of its kind in the United States. When the bridge required repairs in the 1960s, Liberty County hired the Hurdle Company to make them. The Hurdles were so proud of this bridge that a profile of it graced the company’s stationery for many years. The Pugsley Bridge is one of two vehicular suspension bridges in Montana. The other spans the Bitterroot River on a county road near Lolo.¹⁷

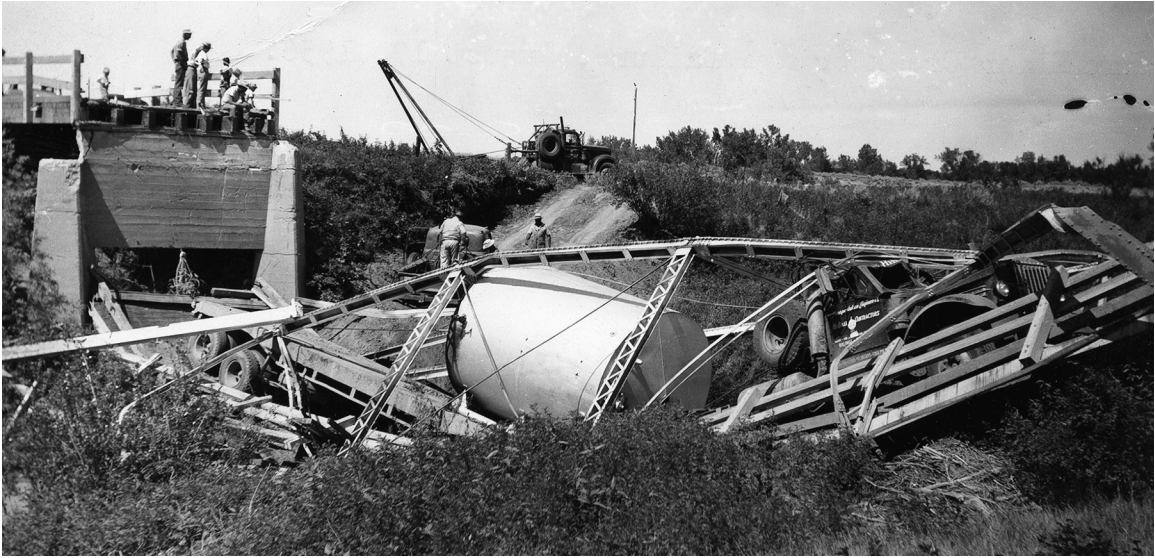
Like the counties, the state highway department replaced many old, decrepit bridges with modern new ones in an effort to facilitate traffic flow, increase safety, and encourage commerce. Its program included rerouting old



BUILT IN 1954 by the William P. Roscoe Company, the new bridge across the Missouri River at Toston sparked a debate about what to do with old steel bridges. Kristi Hager, photographer, MDT

roads that had alignments that were dangerous for commercial trucks and the faster automobiles of the day. Consequently, Montana is speckled with abandoned segments of road and, in some instances, communities bypassed by the current two-lane highways. These remnants are the physical manifestations of a policy that emerged from a debate over the old Toston Bridge that began in 1949 when the highway department proposed a plan to build a new bridge across the Missouri River at Toston as well as a grade separation over the Northern Pacific Railroad tracks at the same place. This debate continued until 1955 when the State Highway Commission finally adopted a policy about bypassed and replaced bridges. The debate involved two issues: the cost effectiveness of relocating the structures and who actually owned them, the state or the counties that may have paid for them. In 1949, Gallatin County had requested the “return to it of an old bridge across the Gallatin River.” The commissioners acquiesced to the request, but they were uncomfortable with their decision.¹⁸

Although Broadwater County wanted the old Toston Bridge, the highway department had plans for it as a replacement for the PN Ferry across the Missouri River at the mouth of the Judith River. County commissioners from Fergus and Chouteau counties had petitioned the State Highway Commission for the relocation of the bridge to that area to replace the old ferry. The residents of Toston, however, did not want to lose the bridge at all, as it carried the main road over the Missouri River and through town. Losing the bridge would have put the town at the terminus of a dead-end road. In June 1949, a delegation of Tostonians appeared before the highway commissioners and objected to the proposed realignment of the highway away from their main street. While the proposed realignment would remove the last at-grade railroad crossing (and a dangerous one) on the highway, local residents felt it more important to keep traffic moving through town than to solve the railroad crossing problem. Retention of the old bridge would provide a connection through the community to the highway. In 1950, the commissioners decided that it would relocate all steel truss bridges replaced on the primary system to the secondary highway system in the county where the bridge was originally located. In accordance with this decision, Gallatin County relocated the old three-span Central Park Bridge to a new site several miles north of the rural community, and the highway department dismantled a 198-foot steel truss across the Madison River north of Three Forks and moved it to a new site near Willow Creek in 1950.¹⁹



IN AUGUST 1956, an overloaded semitrailer caused the collapse of the Box Elder Creek Bridge on Montana Secondary 323, south of Ekalaka. MDT

In 1954, a delegation from Toston asked the highway commissioners to permit the old Toston Bridge to stay in place rather than remove it. Several months later, the Fergus County commissioners discussed with the highway commissioners the possibility of purchasing the Toston Bridge and relocating it to a new site in that county. The highway commissioners talked the men out of the proposal, suggesting instead that a new bridge would cost about the same as relocating the old one. It was not until the completion of the new overpass at Toston in July 1955 that the highway commissioners finally made a decision to leave the old bridge in place.²⁰

Four months later, in November, the commission adopted a policy regarding the disposition of old bridges. The state would decide whether structures built with county and state funds could become the property of the counties. All other structures, it resolved, would be disposed of at the discretion of the highway commission. It would prioritize requests for a given structure, and if no other agency or county wanted a structure, it would be sold at public auction. The 1950s was a decade of restless bridges, with relocations in Powell, Gallatin, Hill, and Custer counties, among others.²¹

Years of neglect and changes in vehicle weights also had a serious impact on many older bridges in Montana during the 1950s. The highway commissioners

The Missouri River Ferries

HISTORICALLY, the Missouri River has been a formidable obstacle to travel in Montana. During the territorial period, many ferries carried traffic across the river, but nobody had the money or technical know-how to build a bridge capable of withstanding the mighty Missouri's flow until 1887 when the Benton Bridge Company built the first steel vehicular bridge across the river. By 1956, sixteen bridges spanned the river from Toston to Culbertson, but the state's vast spaces and sparse population made river ferries an important part of Montana's rural transportation system. In 1956, six Missouri River ferries operated in Montana. Today, that number has shrunk to three: the Carter, Virgelle, and McClellan ferries. Although recently refurbished, they evoke another era in Montana history.²

The Missouri River ferries are simple affairs and have not changed much since the early twentieth century. They consist of double-hulled boats with engines attached by pulleys connected to steel cables stretched across the river between two towers anchored on the shore. Vehicles using the ferries stop at boat ramps at either side of the river. The driver either honks his horn to summon the ferry operator or can call from a phone located near each ramp. The engine and cable system pull the boats across the river.

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CHOUTEAU COUNTY established the Carter Ferry in 1917 to provide access to the Great Northern Railway station at Carter for people living south of the river. A. H. Stewart built the ferryboat for \$850; the county contracted with Sam Denton to operate the facility. As part of its legislative mandate to develop standardized plans for all river crossings in the state, highway department engineer Charles Kyle developed a standardized

ferryboat design for the State Highway Commission about 1915. In 1945, the state replaced the Carter Ferry with a newer steel-hulled boat that continued in service until 2004.

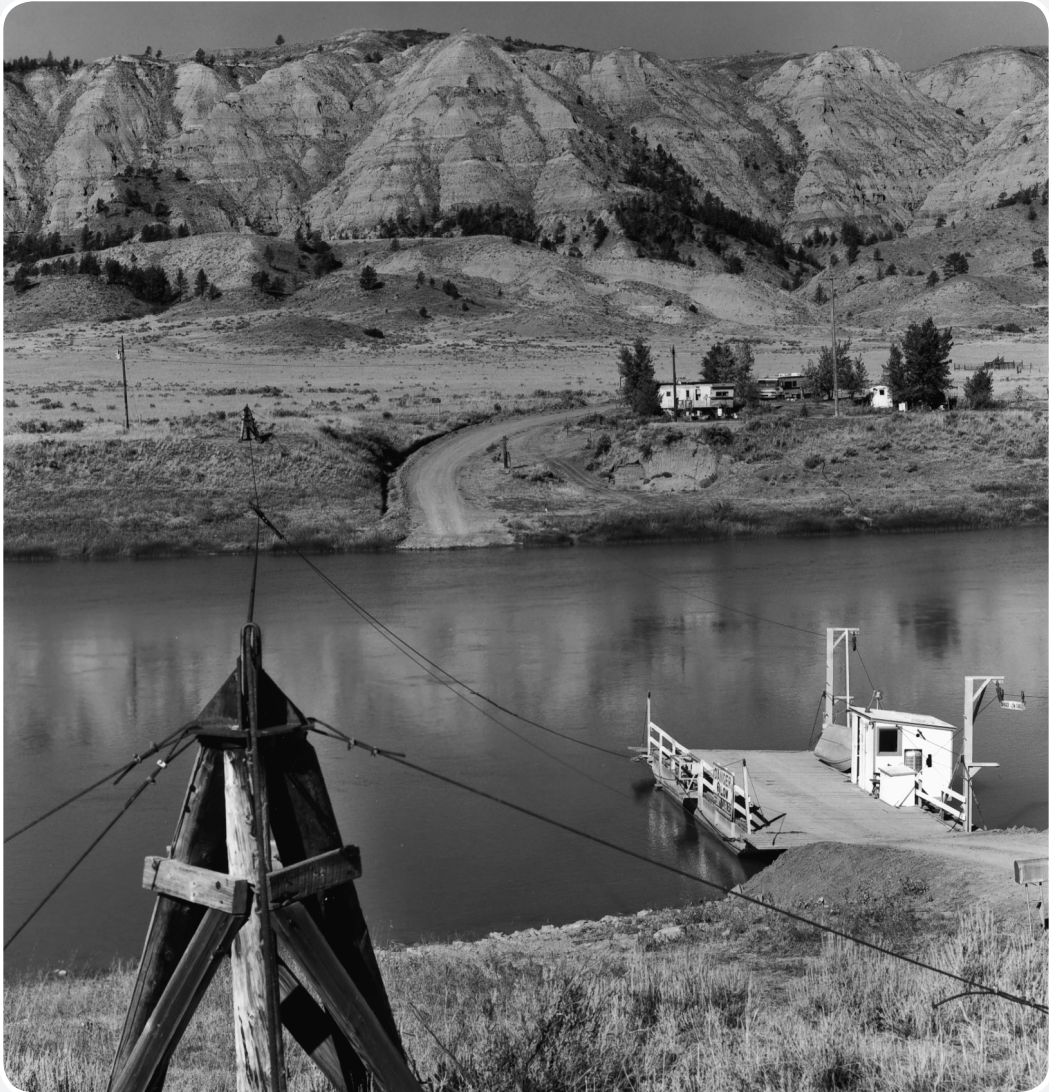
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THE VIRGELLE FERRY is located just upstream from Coal Banks Landing, where, historically, steamboats took on coal for their voyage or off-loaded people and supplies. John C. Meyers built the ferry for Chouteau County in 1913 for \$1,050, and pioneer rancher Virgil Blankenbaker operated it for many years. The county commissioners paid the ferry operators \$80 per month to run the ferry. At Virgelle, the county even provided the operator and his family with a residence on the north side of the river. The county upgraded the old ferryboat with an International tractor engine around 1950 and replaced the original boat in the early 1960s.

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THE MOST REMOTE ferry still in operation in Montana is located in the Missouri Breaks, twenty miles north of Winifred. Homesteader Jack McClelland built a ferry about a half-mile above the existing ferry sometime in the early 1900s. McClelland operated the ferry until 1928 when he sold it to his neighbor, James Stafford, a politician from Winifred. Stafford ran the ferry for only a short time before an ice jam destroyed it.

In 1940, the U.S. Army Corps of Engineers acquiesced to requests from Blaine and Fergus counties for a ferry crossing near the old McClelland Ferry. The corps assisted the counties in locating a new site in deeper water and helped build the cable anchor towers and the vehicle ramps. The Civilian Conservation Corps also assisted in building the facility, while Blaine and Fergus counties built the approach roads through the broken terrain to the ferry. Farmers and ranchers in these



Established by the federal government in 1940, the McClelland Ferry is one of three river ferries in operation in Montana. Kristi Hager, photographer, MDT

counties rely on the ferries to get across the Missouri, but many passengers on the boats are city folk who want to experience the novelty of a boat ride across the river. Because the ferries still perform a valuable function, the Montana Depart-

ment of Transportation and Blaine, Chouteau, and Fergus counties undertook a project to refurbish the aging boats and, with special federal funding, replaced the boats in 2004 with vessels designed to closely match the old ferryboats. ❄️

regularly received requests from communities to replace deficient and, in some cases, dangerous bridges. To add to the problem, the commissioners believed that bridges on primary roads built with county funds were not always their problem. The City of Forsyth, for example, asked the commission to replace the Yellowstone River Bridge that carried U.S. Highway 12 traffic into the north side of that community. Instead of considering the replacement of the bridge, which the commissioners declared was Rosebud County's responsibility, they contemplated limiting the maintenance of the road that led to it until the county replaced or repaired the old bridge.²²

Bigger trucks put heavier loads on an increasing number of substandard bridges after World War II, which caused more failures on structures located on primary highways. It helped fuel concerns among state engineers and highway commissioners that Montana's bridges were in dire need of upgrading. A tanker caused the Fly Creek Bridge on U.S. 10 near Billings to collapse, spilling gasoline into the creek in 1946. In 1952, a geophysical drilling truck destroyed a bridge over the Milk River on Montana Secondary 243 north of Saco. During the 1950s, the highway commission funded the widening of many narrow bridges on the most heavily traveled two-lane highways in the state.²³



MUCH OF the early interstate work in Montana was concentrated around Butte. The minerals mined there were critical to national defense, making highway improvements a priority for the Montana Highway Department. In June 1954, it awarded a contract to the Dudley Construction Company to construct an overpass in Butte. The approach roads came later, leaving, for a time, this monument to the new interstate program standing alone in an open field near the Montana School of Mines. MDT

The Cold War also played a significant role in what bridges the highway commission funded during the 1950s. Bridge projects not located on the National System of Interstate and Defense Highways received low priority status from the commissioners. The interstate and defense highway system replaced the War Department's old priority one, two and three highways of the Second World War in 1944. Consequently, the highway commission was reluctant to take on many major bridge projects not on that system. The public's strong feelings about some deficient bridges and the highway commission's lack of enthusiasm in replacing them led the Thirty-fourth Legislature to pass a law in March 1955 that provided direction to the highway commission. Intended to promote the construction of new bridges across the Yellowstone and Clark Fork rivers, Senate Bill 49 authorized the highway commission to allocate funds to pay "for the reconstruction of any major bridge or bridges on the State Highway Primary System." The legislators had four bridges specifically in mind when they crafted the law and considered each "dangerous, by their very nature, to the traveling public." Three crossed the Yellowstone River—at Glendive, Forsyth, and Miles City. The fourth spanned the Clark Fork at Missoula. Between October 1955 and September 1956, the commission awarded contracts for the three Yellowstone River bridges. It later replaced the Clark Fork Bridge at Missoula, and Missoula County acquired the old through truss span and moved it upriver near Van Buren Street where it has since served as a pedestrian crossing.²⁴

None of the four bridges singled out for replacement by the legislature were critical components of the National System of Interstate and Defense Highways, which occupied much of the highway commission's attention during the 1950s. Montana had 1,221 miles of highway on the system, including U.S. Highways 10, 91, and part of 87. The highway department's overall program remained steady, with twenty-five bridge projects let to contract each year. As in the 1930s, most were timber bridges. Unlike previous decades, though, a higher percentage of the projects were located on secondary farm-to-market roads. Created by the State Highway Commission at the direction of the Bureau of Public Roads in 1934, Montana's secondary highway system consisted primarily of old county roads that provided access to agricultural and mining areas. The creation of the system made the roads eligible for federal funds for upgrading and maintenance, but the uneven allocation of federal funding during the war meant that the highway commission could do little work on the system until after the war. Even then, most of the bridges on the system were constructed by the counties and failed to qualify for federal funding. Though

the highway department initiated a program in 1946 to improve the secondary highways, by 1956 fully ninety-four percent of the state's bridges were deficient in some way—either too narrow for the approach roads or incapable of meeting load standards.²⁵

Similar problems across the nation and Cold War fears led President Dwight Eisenhower to sign the Federal Aid Road Act into law in 1956, creating the interstate highway system, the greatest public works project in world history. Based on the German autobahns of the 1930s, the interstate system, like its European counterpart, was designed to expedite the movement of military supplies and vehicles in case of national emergency. American engineers designed interstate highway bridges with higher clearances to allow the unobstructed passage of missiles, tanks, and other military equipment.

The highway commission and highway department spent the first years of the project planning the route of the interstates and for the actual construction of them. The interstate program caused a profound change in how the department did business and in its priorities. The sheer magnitude of the program meant that the Montana engineers had to adopt new building materials, specifically prestressed concrete, which was durable and relatively inexpensive. The material was ideally suited for streamlining bridge designs as necessitated by the program. Unfortunately, these prestressed concrete bridges also exacerbated the blandness of the interstates since there was virtually no variation in design and appearance.²⁶

Aesthetics had given way to speed and convenience, which, ironically, had long been the intention of Montana's bridge builders for the preceding century. Bridges built during the late 1940s and 1950s lacked the visual appeal represented in many of the bridges of the pre-war years. They were simple, utilitarian, and functional. They could accommodate the demands placed on them by commercial trucks, military vehicles, and, the modern beneficiaries of this Cold War legacy, tourists. Interstate bridges became uninteresting extensions of the road, precursors of the regimentation of the interstate expansion era of the next two decades. What the bridges lacked in individual distinction, however, they made up for in practicality. Postwar Montana bridges served the intent of the federal and state governments by providing motorists with a dependable structure that could accommodate the traffic demands placed on them, the historic goal of a century of Montana bridge builders.